

1           **IMPROVING FETCH OPERATIONS IN A**  
2           **DISK DRIVE CONTROL SYSTEM**

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**ABSTRACT**

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6         A method and system for improving fetch operations between a micro-controller  
7         and a remote memory via a buffer manager in a disk drive control system comprising a  
8         micro-controller, a micro-controller cache system having a cache memory and a cache-  
9         control subsystem, and a buffer manager communicating with micro-controller cache  
10        system and remote memory. The invention includes receiving a data-request from micro-  
11        controller in cache control subsystem wherein the data-request comprises a request for at  
12        least one of instruction code and non-instruction data. The invention further includes  
13        providing the requested data to micro-controller if the requested data reside in cache  
14        memory, determining if the received data-request is for non-instruction data if requested  
15        data does not reside in cache memory, fetching the non-instruction data from remote  
16        memory by micro-controller cache system via buffer manager, and bypassing cache  
17        memory to preserve the contents of cache memory and provide the fetched non-  
18        instruction data to micro-controller.